

What is claimed is:

Sub A1

1 1. A hybrid integrated circuit device comprising: a
2 substrate in which at least a surface is provided with
3 insulation; a first electrode and a second electrode formed
4 on the surface; a light emitting element connected with the
5 first and second electrode; a seal which is disposed in a
6 periphery of said substrate; and a transparent substrate
7 which is fixed via said seal.

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1 2. A hybrid integrated circuit device according to
2 claim 1, which comprises:

3 a substrate in which at least a surface is provided
4 with insulation;

5 a first electrode which is formed on a region of the
6 surface of said substrate, and which is made of Cu covered
7 with an oxidation resistant metal;

8 a second electrode which is formed on another region
9 of said substrate, and which is made of Cu covered with an
10 oxidation resistant metal;

11 a light emitting element in which a rear face of a
12 chip is electrically fixed to said first electrode;

13 connecting means for electrically connecting said
14 second electrode to an electrode which is on a surface of

15 said light emitting element;

16 a seal which is disposed in a periphery of said

17 substrate; and

18 a transparent substrate which is fixed via said seal.

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1 3. A hybrid integrated circuit device according to
2 claim 1, wherein a plurality of hybrid integrated circuit
3 substrates are arranged, each of said hybrid integrated
4 circuit substrates comprising:

5 a substrate in which at least a surface is provided
6 with insulation; A

7 a first electrode which is formed on a region of the
8 surface of said substrate, and which is made of Cu covered
9 with an oxidation resistant metal;

10 a second electrode which is formed on another region
11 of said substrate, and which is made of Cu covered with an
12 oxidation resistant metal;

13 a light emitting element in which a rear face of a
14 chip is electrically fixed to said first electrode;

15 connecting means for electrically connecting said
16 second electrode to an electrode which is on a surface of
17 said light emitting element;

18 a seal which is disposed in a periphery of said
19 substrate; and

20 a transparent substrate which is fixed via said seal,
21 and connecting means for electrically connecting said
22 first and second ^A electrodes on said hybrid integrated
23 circuit substrates with one other in order to enable said
24 light emitting element on said hybrid integrated circuit
25 substrates to emit light is disposed.

Sub A2 } 4. A hybrid integrated circuit device according to
2 claim 1, wherein a gas for preventing said light emitting
3 element and/or said electrodes from deteriorating is filled
4 into a space defined by said substrate, said transparent
5 substrate, and said seal.

1 5. A hybrid integrated circuit device according to
2 claim 1, wherein a spacer which is made of an insulating
3 material is disposed inside said seal.

1 6. A hybrid integrated circuit device according to
2 claim 1, wherein a light transmitting resin which is formed
3 into a lens-like shape is disposed in said light emitting
4 element.

1 7. A hybrid integrated circuit device according to
2 claim 6, wherein a top portion of said light transmitting
3 resin abuts against said transparent substrate.

Sub A3

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8. A hybrid integrated circuit device according to claim 3, wherein said hybrid integrated circuit substrates are arranged in a matrix form, and at least end ones of said hybrid integrated circuit substrates are inclined at a predetermined angle with respect to a center one of said hybrid integrated circuit substrates.

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9. A hybrid integrated circuit device according to claim 1, wherein said seal is made of a glossy material which reflects light emitted from said light emitting element.

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10. A hybrid integrated circuit device according to claim 1, wherein a filling hole for the gas is formed in said seal.

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11. A hybrid integrated circuit device according to claim 9, wherein said seal is made of a brazing material formed on a metal film which can be wet with the brazing material.

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12. A hybrid integrated circuit device according to claim 1, further comprising an exhausting hole for a gas included inside said seal and a filling hole for the gas which are formed in said seal, wherein the exhausting hole

5 and the filling hole are sealed after exhausting and
6 filling a gas.

1 13. A hybrid integrated circuit device according to
2 claim 1, wherein said gas is an inert gas.

Sub AH

2 14. A hybrid integrated circuit device according to
3 claim 1, wherein the surface of the substrate is covered
with solder resist.

1 15. A hybrid integrated circuit device according to
2 claim 1, wherein the substrate is made of glass.

1 16. A hybrid integrated circuit device according to
2 claim 8, wherein the substrates are arranged in a matrix
3 form and at least both end substrates is inclined in
4 vertical and lateral directions so as to realize a
5 paraboloid, and an object to be heated is disposed in a
6 focus of the paraboloid surface.

Add A5